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ABSTRACT

The costs incurred by state education agencies (SEA's) for evaluation activities are looked at in this study, which also examines the possible role that the use of management consulting might play in reducing these costs. It is estimated that SEA evaluation activities in the U.S. today cost about $32 million and that the use of management consulting offers potential savings of about $2.9 million. The study compares management consulting, technical consulting, evaluation, and research activities and explains how each is different. Although management consulting and evaluation activities may overlap, one distinct difference is that management consulting is client centered regarding decision-making whereas evaluation activities emphasize a critical record of program activities or outcomes. The study concludes with a number of recommendations for further research, including a refinement and confirmation of the figures presented here, and studies to show how actual savings might be achieved in practice. (Author/JM)

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paper and report series

No. 69 PILOT FIELD STUDY OF SEA EVALUATION COSTS

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EA 015 285

No. 69 PILOT FIELD STUDY OF SEA EVALUATION COSTS

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PREFACE

The Research on Evaluation Program is a Northwest Regional Educational Laboratory project of research, development, testing, and training designed to create new evaluation methodologies for use in education. This document is one of a series of papers and reports produced by program staff, visiting scholars, adjunct scholars, and project collaborators--all members of a cooperative network of colleagues working on the development of new methodologies.

What are the costs associated with evaluation at the state level? Can management consulting techniques be used to reduce some of these costs? After summarizing the costs of evaluation today (approximately $32 million at the state level), Dr. Stanfield reviews the ways in which management consulting techniques could replace standard evaluation approaches or save as much as $2.9 million. Important distinctions in considering evaluation costs are also included in this pilot study report.

Nick L. Smith, Editor
Paper and Report Series

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SUMMARY

This pilot study examines SEA evaluation costs and the possible role that management consulting might play in reducing them.

It is estimated that SEA evaluation, in the US today, costs about $32 million, and that management consulting offers potential savings of about $2.9 million in this figure. In addition, even greater savings may also be possible at the federal level.

The study compares and contrasts management consulting, technical consulting, evaluation, and research. Management consulting and evaluation have areas of overlap, and also areas of distinctive difference, the main one of which is in the client-centered emphasis of management consulting on advice for decision making, in contrast to evaluation's emphasis on a critical record of program activities and outcomes.

The study lists a number of activities that further research might follow to refine and confirm these figures, and to show how actual savings might be achieved in practice.

1. INTRODUCTION

This is the final report on the study: Pilot Field Study of SEA Evaluation Costs, carried out by the consultant for the Northwest Regional Educational Laboratory (NWREL), under the direction of Dr Nick Smith, Director, Research on Evaluation Program.

Recent Program activity has emphasized three major aspects of evaluation, namely, methodology, impact and practice. Methodology has been explored, for example, in the metaphor series of papers, in which potential new approaches to evaluation are sought among metaphors derived from practices in other fields, e.g., operations research (Page, 1979), investigative journalism (Guba, 1979). The question of the impact of evaluation has been explored in a number of papers on SEA evaluation and policy, which are summarized by Smith (1980). These papers are also concerned with describing practice, that is, what actually goes on in SEA evaluation units, as an aid to establishing a more realistic framework for discussion and research. A previous paper by the present consultant builds upon this work in reviewing SEA evaluation practice from a management consultant's point of view (Stanfield, 1981).

The present study is part of the Program's move to open up a new area of research, dealing with the costs of evaluation, a subject that is not only complementary to the Program's earlier work, but especially timely, in the light of current economic conditions. As a pilot study, therefore, its goals are threefold: to develop an initial approach to the analysis of SEA evaluation costs, to develop initial quantitative

estimates of these costs, and to suggest directions for further research in this area.

In addition, the study considers the possible application of management consulting techniques in reducing SEA evaluation costs. This is done because the Program is aware of some highly cost-effective examples of evaluation carried out by management consultants in other contexts, and wishes to explore whether or not, and under what conditions, their techniques might be applicable to SEA evaluation.

Costs of SEA evaluation, like the costs of other internal services such as computing centers, can be viewed from two points of view. From the inside, or supply point of view, we look at the cost of operating the evaluation unit and providing service to its clients, how these costs are made up, and means of reducing them for a particular service level. From the outside, or demand point of view, we look at the price paid for obtaining certain services in the context of the value of the programs, and the importance of the policy issues, to which they relate. This naturally leads on to the broader question of the optimal expenditure on evaluation, rather than the solely minimizing approach of reducing costs. (This optimal question, which is difficult and largely unresolved, is discussed briefly in Appendix A.)

The study has sought to minimize the burden placed upon field respondents at this stage, and consequently field enquiries have been brief and highly focused. Valuable help, both in matters of data and of judgment, has been given by SEA evaluation units in California,

Montana and Washington, two school district evaluation units in Washington, and the National Center for Educational Statistics. A modest literature search on evaluation costs using ERIC indexes was not very productive. Two sources, however, that do deserve to be mentioned here are Boruch and Cordray (1980) and California State Department of Education (1978). The first summarizes a great deal of descriptive material on program evaluation at various levels, and the second outlines in detail the budget structure of one of the nation's leading evaluation units.

The report, itself, is presented in a number of sections, dealing with:

- the costs of SEA evaluation, i.e., how much money is spent on evaluation, where does it come from, what kinds of tasks are carried out, at what cost, and so on;

- management consulting, i.e., what is distinctive about management consulting in relation to evaluation, and what are the conditions under which it could be applied;

- discussion of the applicability of management consulting (and other techniques) to SEA evaluation and an estimate of the potential savings that might be achieved through such application; and

- recommendations on further research based upon the experience of the pilot.

Appendix A discusses experience with management support systems in other contexts to see if this might throw any light on the costs of evaluation as a support tool for educational management. Appendix B lists references used in the study.

The consultant would like to thank the Program Director, Dr Nick Smith, for helpful discussions on earlier versions of this report. The views expressed, however, remain those of the consultant, and are not necessarily those of the Program.

2. SEA EVALUATION COSTS

SEAs differ considerably in the way in which they approach the management of a state's educational enterprise. Within SEAs, evaluation units differ similarly, not least in size and sophistication. Evaluation, itself, as practiced in SEAs, is a multi-faceted activity often difficult to reduce to a compact set of headings. Consequently, in any attempt to quantify and analyze the costs associated with SEA evaluation there is bound to be a considerable degree of simplification. This will, of course, be familiar to evaluators concerned with the limitations of summative evaluation. Nevertheless, it is believed that the estimates presented below are sufficiently realistic to serve as a useful first step in describing SEA evaluation costs and in guiding further research beyond this pilot study. They should not, however, be taken out of context.

In deriving these estimates it has been necessary to be pragmatic, utilizing sources as available. In some cases there are reliable and relevant printed sources, e.g., from the National Center for Educational Statistics. In other cases, the three SEA evaluation units contacted (California, Montana, Washington), as well as a number of other respondents, have provided information and estimates from which the consultant has then derived the figures below. To save repeating their names, these three state evaluation units will be referred to as the <u>respondent states</u> in what follows.

Estimates of SEA evaluation costs are now discussed, under the headings:

- costs of education;
- costs of SEAs;
- costs of SEA evaluation;
- SEA evaluation costs breakdown; and
- individual evaluation tasks and costs.

Unless otherwise stated, they are for 1980-81.

2.1 Costs of Education

The US currently spends about $180 billion annually on education of all kinds, of which about $93 billion is spent on the segment of interest to this pilot study, namely, public elementary and secondary education. This figure has been growing at about 9% per year over the last decade, but is likely to slow down now.

Funding is split between federal, state and local sources in the approximate ratio 9%:45%:46%. This ratio has remained fairly constant over the last decade, with a slight trend towards more state funding and away from local funding.

Expenditure varies considerably by state, but when size is discounted, expenditure per capita is broadly comparable.

There are over 40 million pupils served by over 16,000 local school districts.

Derivation. These figures are taken from the Digest of Education Statistics, 1979 edition, quoting the National Center for Educational Statistics. Totals are updated by the 9% growth rate for 1969-79. The figure for public elementary and secondary education is obtained by discounting the figure given in the Digest by 10%, since the latter figure includes some other schools, e.g., residential schools for exceptional children, federal schools for Indians, federally operated elementary and secondary schools on posts, and sub-collegiate departments of colleges.

2.2 Costs of SEAs

Total costs of SEAs of relevance to this study, i.e., concerned with local public education, are estimated to be about $700 million annually. Thus it costs about three quarters of one percent of the total education budget to manage it at a state level. There are, of course, additional management and supervisory costs at the local level (county, district, and individual school), but these are outside the scope of the present study.

SEA costs vary considerably from state to state, most obviously as a function of size of state.

Derivation. This figure is derived from a recent survey of SEA expenditure, carried out by the National Center for Educational Statistics, not yet published.

It should be noted that gross costs of SEAs total over $1300 million annually, but include a variety of items that are not relevant to this study, such as state libraries, public health services, school bus drivers, special education schools, vocational rehabilitation, and so on.

2.3 Costs of SEA Evaluation

Evaluation of elementary and secondary education is carried out at federal, state and local levels. Consequently, before examining the cost of evaluation at the state level in detail, it seems useful to try to give some sense of the relative proportion between levels. Estimates of current expenditure on evaluation at the different levels are:

federal	$25 million
state	32
local	96
	$153 million

Derivation. The federal figure is based upon data given by Boruch and Cordray (1980) on contract expenditure on evaluation by the Office of Evaluation and Dissemination of the US Department of Education, plus 10% for internal activities, e.g. contract servicing. This is almost certainly an underestimate of federal evaluation activities, perhaps by a substantial margin.

The state level figure is based upon individual SEA evaluation costs for the respondent states, together

with National Center for Educational Statistics figures (unpublished) for planning and research at the state level, a somewhat broader category. This figure was checked with staffing estimates for consistency (see section 2.4b below). It appears that this estimate is highly dependent upon how the scope of evaluation is defined (see section 2.4c below).

The local figure is based upon enquiries with two LEAs (in Washington), together with the judgment of the respondent states on the ratio of LEA to SEA expenditure on evaluation. The ratio of three shown is considered a reasonable first estimate.

The figures on SEA and LEA evaluation appear broadly consistent with those of Frankel et al (1979), but are not explicitly related due to different scope definitions. Frankel et al contacted over 6000 organizations in 1976-78 in a major study of national activities, staffing and costs in educational research, development, dissemination and evaluation (RDD&E).

However, the <u>funding</u> for this evaluation is somewhat different. The reason for this lies in the difference between the original source of the funds, and where the funds are finally spent. For example, an SEA evaluation budget includes money from federal as well as state sources. In turn, an LEA budget includes money from federal and state as well as local sources. Thus, federal <u>funding</u> on evaluation not only includes federal <u>expenditure</u>, but also portions of state and local <u>expenditures</u>. The same adjustment is made for state and local levels. Estimates for the <u>funding</u> of evaluation of elementary and secondary education are:

federal	$58 million
state	55
local	39
	$152 million

The apparent discrepancy in totals is due to rounding.

Derivation. The percentage of SEA evaluation budgets supplied from federal funds is estimated at 50% based upon the experience of the respondent states. For LEA breakdown, Boruch and Cordray (1980) quote a UCLA study finding that 18% of LEA evaluation is federally funded. The balance is apportioned to state and local sources in proportion to the source of total education funds from these two sources (see section 2.1 above).

When these figures are put alongside the estimates above for the funding of elementary and secondary education, we can see that, for every dollar of education funded, the federal government spends about $.007 on evaluation, or a little over one half of one percent. The comparable figures for state and local levels are around $.001 ($.0013 and $.0009 respectively). One way of interpreting these figures is to say that the federal government is about seven times more concerned with the results of its funded programs than state or local government. On the other hand, this may simply reflect the fact that federal funding is often for more demanding or sensitive student constituencies. Another factor in the small state and local ratios is that evaluation at these levels is often not provided for explicitly at the time of funding, and consequently there is a temptation to reduce expenditure on evaluation in favor of the main programs

when the time comes to spend the money. These figures may be contrasted with the suggestion that between three and five percent should be spent on the evaluation of programs of interest (Alkin,1980).

Some local expenditure takes place at the building level, but this has not been estimated separately.

As might be expected, there is considerable difference in the actual size of SEA evaluation units (Caulley and Smith, 1978), and consequently in their budgets, which range from under one hundred thousand dollars to over five million (Frankel et al, 1979).

2.4 SEA Evaluation Costs Breakdown

In this section we will examine SEA evaluation costs more closely - the $32 million figure estimated above.

(a) Outside contracting. Practice regarding outside contracting differs widely between states (Caulley and Smith, 1978). An estimate of the average proportion contracted out is 35%, based upon the experience of the respondent states. Thus, outside contracting totals $11.2 million, leaving $20.8 million for internal costs.

Contracts may be for production items, as in statewide testing programs, for actual evaluations, or for other services. Contracts may range from around one thousand to almost one million dollars, again based upon the experience of the respondent states.

(b) Internal cost breakdown. Most internal costs are staff salary costs, which often lump together professional and clerical, full and part-time, with the remainder made up of service, supply and travel costs. Based upon the experience of the respondent states, estimates for the breakdown of internal costs are:

salaries	$17.7 million	85%
services, etc.	3.1	15
	$20.8	100%

These staff costs reflect an average of about $27,000 per capita, including fringe benefits. This corresponds to an SEA evaluator national population (professional plus clerical) or about 650.

These figures are based upon the experience of the respondent states, cross checked with Caulley and Smith (1978) and Cronin (1980). Caulley and Smith's figures, grossed up on a population basis to the whole country, come to about 500 (in 1978). Cronin claims a figure of 2000 for research, evaluation, planning and assessment, a somewhat broader category than we are considering here.

(c) Costs by activity type. Stanfield (1981) has divided SEA evaluation activities into four main groups:

- research analyses, that is, studies of an essentially ad hoc nature involving design, data collection, analysis and reporting, either dealing with some prospective course of action or policy issue, or with a required retrospective assessment;

- information systems, that is, developing and operating computerized information systems with data on the state educational enterprise, schools and students;

- testing, e.g., statewide testing of a particular grade; and

- expert assistance, or consulting, for a variety of clients, e.g., legislative staff, SEA management and LEAs.

These categories are important later on for considering the potential contribution of management consulting techniques.

SEA evaluation internal cost breakdown by activity type is estimated as follows:

research analyses	$5.2 million	25%
info systems	5.2	25
testing	5.2	25
expert assistance	5.2	25
	$20.8 million	100%

SEA evaluation external (outside contract) cost breakdown by activity type is estimated as follows:

research analyses	$1.68 million	15%
info systems	0.56	5
testing	8.4	75
expert assistance	0.56	5
	$11.2 million	100%

These figures are based upon the experience of the respondent states. Although the internal cost breakdown is apparently evenly distributed between activities, individual figures are quite varied. It appears that research analyses represent a highly skewed category, substantial for larger states and/or those with major categorical programs, and negligible for many others. There appears to be good agreement on the distribution of external costs, most going for testing contracts.

For the record, it may be of interest to look at the figures for internal and external cost combined, from which it can be seen that testing is clearly the largest category:

research analyses	$6.88 million	22%
info systems	5.76	18
testing	13.6	42
expert assistance	5.76	18
	$32 million	100%

(d) Discretionary funding. Funding for SEA evaluation tends to be specific and associated with particular programs. Consequently there is little discretion in choosing tasks to work on, perhaps 10% of budget, based upon the experience of the respondent states. There may even be little discretion in how to work on tasks, and what results to provide. This is due to the practice of mandating certain types of methodologies and output formats at the time of funding in the interests of data consistency and accountability. It is possible, in addition, that the appearance of explicit discretionary funding is deliberately avoided by SEA evaluation units in the present times of budgetary constraint.

2.5 Individual Evaluation Tasks and Costs

Individual evaluation tasks vary greatly in size and cost. This variety is important in considering possible approaches to containing or reducing evaluation costs. However, this variety also makes it difficult to describe a typical evaluation, without going into long explanations of other tasks that should also be considered. Boruch and Cordray (1980) and Frankel et al (1979) provide information on sizes and costs of individual tasks.

At the federal level, typical contracted projects last 24 months and cost $100-500,000, with some lasting over five years, and costing several million dollars. Case study outlines of a dozen or so projects are given by Boruch and Cordray.

Frankel et al show how the sizes and costs of activities in SEAs and LEAs overlap. The largest urban LEAs have evaluation units larger than most states. There is an enormous range of activity within each category. LEAs conduct from zero to over one hundred projects each year, with an average of 13 at an average unit cost of about $13,000. SEAs conduct the same range of projects each year, but with an average of 27 at an average unit cost of about $44,000.

While these figures show the expected gradation of cost, and hence size and duration, from federal through SEA to LEA projects, they are still too general for our purpose in this pilot study.

Much more helpful is the Zero Base Budget of the California Office of Program Evaluation and Research (California State Department of Education, 1978). While California is not typical of other states, it may be considered as an example of a highly regarded, comprehensive evaluation program, which probably includes, as subsets, the activities of many other states. Of particular interest to the present study is the breakdown of evaluation tasks into eight functions, and the explicit budgeting of effort against each of these, in the area of what we call research analyses above (section 2.4c). These functions, together with the average allocated percentage of effort against each, are shown overleaf:

A. Generating evaluation questions and issues	7%
B. Designing evaluations and special studies	7
C. Developing data collection procedures and instruments	9
D. Collecting data	23
E. Analyzing and interpreting data	17
F. Writing, presenting and disseminating reports	8
G. Providing evaluation assistance to county offices and local school districts	21
H. Providing evaluation assistance to SEA management and program staff	7
	99%

In the actual budget document, these functions are subdivided further. The breakdown above enables us to see the relative amount of effort expended on the three major phases of the tasks:

front end, or set up, activities	14%
core data collection and analysis	49
back end, or presentation, application and assistance activities	33
	99%

3. MANAGEMENT CONSULTING TECHNIQUES

This section considers some aspects of management consulting of relevance to its potential for reducing the costs of SEA evaluation, rather generally at this stage in the study.

Traditional management consulting is mostly concerned with the internal operations of an organization, e.g., the management of staff, organizational structure, production, marketing, planning and control (Kubr, 1977). In the present case, however, we are considering management consulting applied to evaluation or evaluation-like activities, which is a somewhat specialized subject.

As a first step is seems useful to identify four related skill areas, namely, management consulting, technical consulting, evaluation, and research. These are all, to some extent, examples of what might be called helping-enquiring skills, and which are often difficult to distinguish clearly one from the other because of overlap. These skills share approaches of the general form:

- contact with the client
- agreement on what is to be done
- fact finding
- fact analysis
- conclusions/recommendations
- presentation to the client
- application/use by the client

with some degree of liaison/communication with the client throughout.

One of the major reasons for confusion lies in the difference between a skill area and a practitioner, e.g., between evaluation and an evaluator. Because of legitimate overlap we may find, from time to time, a management consultant performing research, an evaluator performing technical consulting, or a researcher performing evaluation. What creates distinctions in practice is the sense of characteristic skill shown by a person or an organization over a period of time, and evidenced in their track record and client references. Consequently, it may not be particularly helpful to describe a specific project as a management consulting project, since other professionals may feel that it is something that they themselves might do with equal confidence.

Having said this, nevertheless, there are differences which are characteristic of the different skill areas, and which lead to different classes of clients, different expectations of what they can perform, and different approaches to tasks in practice. A medical example may capture some of this characteristic difference through the illustrative equivalences below:

management consultant	general practitioner
technical consultant	surgeon
evaluator	radiologist
researcher	physiologist

The general practitioner typically has the broadest scope in helping the client, and the client is aware of this. The surgeon is more specialized, restricted mostly to his area of expertise. The radiologist has a measuring/diagnostic function, but in regard to a

unique methodology, in this case, X-rays. The physiologist sees the client more as an object of research - his true clients are his research sponsor and his peers across the country. This last distinction will tend to separate out the first three with their emphasis on helping from research with its emphasis on enquiring, and its "hidden clients".

Another, hypothetical illustration closer to educational evaluation may make these distinctions more specific. Consider a state level committee funding an educational program X to achieve purpose Y, for example, a pull-out program to help refugee children become more competent in basic skills so that they can participate in the basic school programs. The committee might hire a management consultant to ask if funding should be continued, with what changes if any, or if there is another (better) way to achieve the goal sought than by the program in its present form. A technical consultant might be hired to advise on a new instructional module for the program, and an evaluator to measure and report on the program and its outcomes. Finally, a researcher might obtain funding from other sources to examine, with the committee's approval, sex-linked differences in refugee acceptance of the program. While this example may seem a bit artificial, it does show management consulting as clearly the most directly concerned with the client's decisions and options for action.

We now turn to consider management consulting and evaluation more closely. The steps of the general helping-enquiry approach outlined above offer a useful set of headings.

(a) Contact with the client. Management consultants usually deal with the client directly, rather than solely through staff intermediaries, i.e., would meet with the actual committees, not just with their staffs, although the latter might serve as liaison throughout the project.

(b) Agreement on what is to be done. The goals of the activity would be negotiated jointly with the consultant, rather than being fixed by the funder in advance, and then followed without discussion or amendment.

(c) Fact finding. The management consultant tries only to find out enough to answer the questions and prove the point, making use of key people as respondents and the "80/20" rule to find out what is necessary and sufficient as economically as possible. (The 80/20 rule says that 80% of the effect is due to 20% of the activity or resource, and vice versa.) The evaluator on the other hand is often required to be comprehensive.

(d) Fact analysis. This is generally not a distinguishing activity. The evaluator will typically use more sophisticated analytical techniques than the management consultant, but these may not be as robust as the latter's in the face of unreliable data and an often tight schedule.

(e) Conclusions/recommendations. The management consultant offers recommendations for change,

addressed to the client's decision process, and with the prior expectation of the client that this will be so. The evaluator may have to be content with publishing the report. However, this is often a public document, in contrast to the often confidential management consulting report.

(f) Presentation to the client. Both evaluator and management consultant present their results to the client. The emphasis of the evaluator appears to be on the results themselves, and how they are arrived at. The management consultant tends to focus on what they mean for the client.

(g) Application/use by the client. Both management consultant and evaluator are often disappointed that the client does little with their work. However, this is generally less the case for the management consultant, where client expectations and the thrust of the work lay the groundwork for readiness to act upon practical and advantageous recommendations.

(h) Liaison/communication with the client. In general, the management consultant invests heavily in communication with the client, at the outset in negotiating project goals, during the project, and in concluding discussion and presentation. This leads to flexible, well-controlled work that tracks the client's possibly changing interests, and to surprise-free final results that are most likely to be

persuasive to action. In a sense the consultant becomes a partner to the client through close working together, with increased perception of client interests and concerns throughout the project. This is at some variance with the confrontational, quality control image sometimes put forward of evaluators.

In considering the overall distribution of effort in the course of a project, we may refer back to the California summary figures in section 2.5 above. In contrast, a management consulting project might have a breakdown of:

front-end, or set-up, activities	30%
core data collection and analysis	40
back end, or presentation, application and assistance activities	30
	100%

In addition, rather than data collection and analysis being treated as a major block of effort expended without client contact, the management consulting project may proceed in an iterative, adaptive manner, with frequent client contact to discuss and respond to emerging results as they develop.

In conclusion, therefore, it is clear that management consulting and evaluation have a great deal in common, and yet, at the same time, certain characteristic differences. Some of these differences lie in the approaches themselves, and others in the client

environment in which they are practiced. The more specific question of applicability to management consulting to (SEA) evaluation is discussed in the next section.

4. DISCUSSION

In this section we discuss the applicability of management consulting to SEA evaluation, and estimate the potential savings that might result.

As the last section showed, there is a considerable degree of overlap between management consulting and evaluation. Yet there are important differences, including the essential nature of the product or service rendered, the interface with the client, and the audience for the results.

The essential nature of the management consulting product is advice on imminent decision making, while that of evaluation is more typically a multi-purpose report or data resource, for use now or later. The client interface is typically at a higher level in the case of management consulting than for evaluation, it is serviced more frequently throughout a project, and the management consultant comes to resemble a partner of the client rather than a potential adversary. The audience for a management consulting report is usually small, confidential and directly addressed, while for an evaluation report it may consist of a whole set of parties, each looking for something to support their own case.

Despite the lament about lack of impact, evaluation often starts with good intentions. For example, the functional breakdown of evaluation that is described in the California Zero Base Budget (see section 2.5) is entirely appropriate. So, also, is the advice of Alkin (1980), who says "...the most important part of

an evaluation is "framing the decision context" and that activity is more important than anything else which the evaluator might do." However, these intentions are often not realized. Boruch and Cordray quote a UCLA study of over one hundred LEA evaluation reports, in which they are rated for the presence of thirteen key elements. The most common are:

97% Evaluation results are described or presented

92% Data collection sources, such as tests, records, or observation forms, are identified

81% Data analysis procedures are described or are evident (as in detailed tables)

The least common are:

10% The reliability of the data collection sources, and the validity of the data collection sources for the purposes intended is described

17% The program or product or other object under study in the evaluation is described so that the form of its actual implementation is clear

28% The congruence of the conclusions with the information provided is described or evident

In general, technical issues are dealt with, but the reports are not effective for other reasons. While these are assessed of LEA reports, it seems likely that they are also representative of many SEA reports, too.

It is, of course, true that some SEA evaluators are doing effective management consulting some of the time (in the restricted sense used in this report), but this is not characteristic of the mass of SEA evaluation activity.

As noted earlier (section 2.4), SEA evaluation consists of four different types of activity, concerned with research analyses, information systems, testing, and expert assistance. This breakdown makes it convenient to assess the applicability of management consulting to SEA evaluation as a whole in terms of its applicability to these four individual types of activity. We will now consider these one at a time, assessing potential applicability as low, medium or high.

Research analyses (in the sense used in 2.4) are enquiries to assess the value of an existing program or to contribute to the formulation of policy and policy level decisions. As such, management consulting can play an important role, provided that the clients are willing to allow the consultant access to their decision making process. If the client primarily wants a paper report to serve as a critical record of a program's activities, then much of the potential value of the management consulting approach is lost. In this consultant's view, the potential applicability of management consulting to research analyses is high. Ironically, it is possible that management consulting approaches may have greater impact than more theoretically driven ones, precisely because of their client-centered emphasis.

Information systems take in data from various sources, e.g., LEA reports, testing scores, research results, demographic and financial files. However, they are not an area where management consulting appears to have much potential impact. This is partly because they are enjoying the benefits of falling hardware costs on the one hand, and on the other, a part of their costs due to programming and data entry are not amenable to consulting approaches. The area where this may be possible is in the economic selection of data that will prove to be influential, although this runs counter to present data base trends, which tend to be comprehensive. Potential applicability of management consulting is judged <u>low</u>.

Testing is somewhat similar to information systems from the point of view of applicability of management consulting. Where comprehensive testing is required, building up a comprehensive data base of scores, there seems little that management consulting can contribute, as compared, for example, to technical consulting in low cost testing techniques. This is an important area of costs to address, nevertheless, since it amounts to the largest proportion of evaluation costs overall. Potential applicability of management consulting is judged <u>low</u>, but that of technical consulting is judged <u>high</u>.

Expert assistance, itself, is a form of consulting, but in SEAs this evaluation component usually consists of many small activities. It seems that although management consulting is relevant in principle, in practice the potential applicability is only <u>medium</u>. This is because the key question here is how to manage

a large number of small activities so that they do not exact a disproportionate toll on the SEA evaluation unit, rather than how to reduce the individual costs of a few larger activities as in the case of research analyses.

Ideally, savings to be associated with the ratings above (high, medium, low) should be developed from case studies or other detailed enquiry. This has not been possible in the present pilot study. We approach the question of savings in two stages: how might they be achieved, and how much might they amount to.

There are three ways in which management consulting can lead to savings. The first is in reducing the amount of effort allocated to data collection and analysis. The second is by enabling the client to make practical tradeoffs between approaches (with their anticipated results) and costs, considered at the level of the entire project. These can yield much greater savings than tradeoffs at a lower level, e.g., choice of computer analysis techniques. The third is by continually refocusing effort on the key questions so that, although total project effort is reduced, it is progressively concentrated on what emerge as the determining issues.

Turning now to the question of the possible magnitude of such savings, this consultant believes, on the basis of experience, that indicative levels of savings that are potentially achievable are:

high	30%
medium	15%
low	0%

These estimates are based on the assumption that conditions for management consulting apply, e.g., in respect of access to the client's decision making, and in the client's desire for advice rather than just data.

These figures may now be put together with the SEA evaluation costs breakdown of section 2.4, giving internal savings of about $2.3 million, and external (contract) savings of about $0.6 million, for a total potential savings of $2.9 million annually. This is almost ten percent of gross SEA evaluation costs.

It may be argued that these potential savings are not very significant, when, for example, the California Zero Base Budget exercise requires a savings of 20% to be explicitly identified. However, what is of interest is that the 20% savings that are in fact identified only reduce the budget by about 1% in the area of the evaluation functions described above, even though they make up 35% of the salary cost. This suggests that, at the moment, evaluation in the research analyses sense does not have a lot of slack. Consequently, if management consulting were to offer a means of reducing costs while maintaining effective outputs, then this would be particularly advantageous.

These savings are not the only benefits that might accrue from the use of management consulting in SEA evaluation. To these direct savings we must add the indirect benefits deriving from the leverage that these tasks have upon the state educational policy and management process and upon actual programs, resulting from improved timeliness, better under-

standing, and quality of the results. Once the concept of leverage is raised, we come to the broader question of the optimal level of evaluation expenditure within the context of the entire educational enterprise, rather than the narrower question of how to reduce costs alone of SEA evaluation (see Appendix A).

It should be noted, too, that these savings are only potential, and that, even if they are achievable in principle, there are a number of obstacles to their realization. These obstacles mainly have to do with the near universal resistance that greets almost any proposals for change. Funding agencies, SEA management, and program managers, have all got used to a certain way of dealing with evaluation and evaluators, ways of writing specifications, types of results to expect, relationships (if any) during the work, and so on. Evaluation staff may feel either that they are doing much of this already, or that it will deskill them technically to operate in this mode. LEAs may feel that management consulting will lead to meddling in their own affairs, unlike the limited impact of current evaluation.

For these reasons, confident estimates of achievable savings cannot be made within this pilot study. These must await further research, recommendations on which are given in the next section. It seems clear, however, that the greatest obstacles lie primarily on the demand side, among the various parts of what Alex Law calls the "client system", rather than on the supply side.

Before leaving the question of savings, it should be noted that arguments such as those above can also be

applied to federal spending on evaluation, at least 60% of which certainly lies in the research analyses category. Estimates of potential savings at the federal level, then, come to about $4.5 million annually. These might also be explored in the course of further research.

5. RECOMMENDATIONS

In the light of this pilot study, certain recommendations can be made on further research in the area of costs.

(a) It is difficult to take this line of enquiry further without dealing with actual evaluations, specifically of the research analyses category, that can serve as a test for the applicability of management consulting in practice rather than just in principle. It is important, therefore to study actual evaluations as the next step. Three areas that should receive attention are:

- the way in which the evaluation arises, or is negotiated with the client, and the client's expectations (demand side);
- the actual design and/or conduct of a number (2-5) of case study evaluations using a management consulting approach, examining costs, quality of results and timeliness (supply side); and
- the response of the client system to the evaluation (demand side).

In addition, it is important to select the evaluation contexts carefully, to design a study that is as little burdensome as possible to the SEA evaluators and their clients, whose cooperation is needed, and to consider how the results of the enquiry (if valuable) can best be disseminated persuasively.

(b) The present study treats a number of topics in a preliminary fashion that should be followed up if the results obtained are to be regarded as authoritative rather than merely indicative. These include:

- further refinement of the quantitative estimates of SEA evaluation costs;

- extension of these estimates to federal/LEA levels;

- extension to consider other means of reducing costs, e.g., technical consulting approaches to testing; and

- further review of the costs of management support systems, both to build up a more extensive set of reference ratios to which the percentage of program expenditure allocated to evaluation can be compared, and to develop further material on the concept of optimal levels of evaluation expenditure.

APPENDICES

A. Costs of Management Support Services

B. References

A. COSTS OF MANAGEMENT SUPPORT SERVICES

The dual questions of how to reduce costs and what is the optimal amount to spend are not only asked of evaluation. They are asked of a variety of organizational activities, including data processing and management information systems, market research, advertising, research and development, planning, quality control, etc. These activities are in some way secondary to the primary business of the organization, whether it is making cereal, producing oil, running a hospital, teaching students, insuring risks, etc. It is because of this sense of being secondary, although important, that we refer to them as management support services.

The first thing to establish is that there really are two questions, and that they are quite distinct. There are at least three approaches in general to such costs:

> <u>overhead</u>: they are rolled together with telephone costs, miscellaneous supplies, etc., as overhead, and assumed to play no direct leverage role in the main business. Once this is done, there is only one thing to do next, and that is to try to reduce overhead costs as far as possible, since by assumption this will have no effect on the main business of the organization.
>
> <u>optimal</u>: there is assumed to be some optimal level of expense on these services, after which diminishing returns set in. This

optimal level is conceptually approached as a top-down abstraction, but is more likely to be developed in practice as the sum of a set of bottom-up justifications for optimal expenditure on a case by case basis, e.g., by program or department.

prevailing level: the confidence to set a given level of expenditure derives from prevailing levels among the peer group, rather than from beliefs about its optimal benefits for the particular organization per se.

There is also, by default, a fourth approach which consists of muddling through without any explicit policy on investment level in such services.

The cost reduction approach to evaluation can easily become part of the overhead approach. It is assumed that if service levels are maintained, i.e., there is no discernible effect on the educational process, then it is desirable to cut evaluation costs as far as possible. That is not an unreasonable point of view, although it may not be the most advantageous in the long run. It may also be coupled with the prevailing level approach since there is a certain amount of inter-organizational comparison either explicit or implicit in the educational world.

The optimizing approach is quite different, and requires that some consideration be explicitly given to the leverage effect of evaluation on the whole education process. To the extent that it can be shown that

there is more effective use of the social investment in education through evaluation, then spending on evaluation should be increased. This leads directly to the question of how to show this, and then to the question of what to do if a leverage role cannot be shown. The optimizing approach is the most ambitious for evaluation, but the stakes are high. If it is truly effective, then its role could increase markedly, but if not, it may decline correspondingly.

We have seen above (section 2.3) that evaluation at federal, state and local levels combined represents about 0.16% of the educational expenditure at the elementary and secondary level, and that federal levels run about seven times higher than the other two. How can we judge this in comparison with other areas of activity?

The brief research possible on this question in the course of the pilot study has not been very fruitful, but some results are given below for data processing and management information systems.

The cost reducing approach applied to data processing looks at the breakdown of budgets in the same way as in section 2.4 above. Shaw (1980) gives the breakdown in government data processing costs:

salaries	43%
hardware	46
supplies	9
communications	1
other	1
	100%

Software was not estimated, but would run in the 5-10% range. She is also able to give some prevailing levels of cost in a number of different sectors as a proportion of total budget or revenue:

education	1-3%
metal products	1%
health care	1-2%

These figures include operational support such as payroll and financial accounting as well as management information systems.

Turning to the optimal approach, there is very little available here. What is represented is the cost benefit approach to the cost of individual information system projects, which is a component of the optimal approach (King and Schrems, 1978).

The prevailing level approach is represented by Shaw's figures above, but these are for all of data processing, not management information systems. Figures for the latter (excluding communications) are given by the Diebold Research Program as averaging 0.52% of corporate revenues across industry (MIS, 1979).

This figure is the one most comparable to evaluation. To make the comparison more realistic, it would be appropriate to separate out the testing component of evaluation, since it plays a different role than management information - it is more a product. This very crude comparison suggests that evaluation expenditure is low compared to prevailing levels on management information systems in industry, but that

these levels are much lower than the three to five percent sometimes urged by evaluators for specific programs. There are, of course, also additional costs analogous to evaluation, such as market research, but these have not been studied at this point.

In conclusion, therefore, it appears likely that on a prevailing level basis evaluation expenditure could be increased to the advantage of the overall educational enterprise considered as one of the most important of contemporary social investments.

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